

Remarks

Preliminary Matters

Claim 4 has been cancelled because its text was superseded by the amendment to Claim 1. Claim 10 is cancelled due to Restriction Requirement. No Claims have been added. No additional fees are required. If determined otherwise, the Office is authorized to charge Deposit Account No. 07-1077 for the amount.

§ 102/103 Rejections

The following rejections were made.

1. Claims 1-9 using Jeong et al (US2002/0151653) (see Tables 1 and 2)
2. Claims 1-9 using Imai et al. (US2003/0059637) (see Example 13)
3. Claims 1-9 using Kobayashi et al. (US4895903) (see Examples 9 and 10)
4. Claims 1-9 using Abdou-Sabet (US6100334) (see Examples F42 and 6); and
5. Claims 1-9 using Itoh (US6610786) (see Example 17).

In response, Applicants have amended their claims and submit these remarks in support of those amendments.

Support for the amendments appears throughout the specifications and claims as filed. New text in Claim 1 came from the definition of "minor amount" on Page 3 of the Specification. New text in Claim 3 came from Claim 5, Claim 6, and Tables 2-5.

All Claims as amended are novel over the five different references identified above because all claims now require the minor amount of compatibilizer to be from about 1 to about 5.0 weight percent of the compound.

None of the five references, in the Examples identified by the Office, discloses the use of such a small amount of olefinic copolymer to serve as a *compatibilizer*.

1. Jeong et al. disclose in Paragraph [0020] that less than 5% by weight of olefin-base copolymer rubber is not acceptable. Jeong et al. in Table 2 never exemplify less than 10 parts (about 9 weight percent) of EPM or EOR¹.

2. Imai et al. disclose, at Example 13, 47 parts of ethylene/propylene/5-ethylidene-2-norbornene as their rubber (B-1) and do not include any B-2 rubber at all. Paragraph [0103] may disclose that a small amount of B-2 rubber is suitable, *but Paragraph [0102] requires the α -olefin of B-2 to be the SAME as the α -olefin of B-1.* Applicant's Claims make clear that with EPDM serving as olefinic rubber that the only claimed α -olefin copolymers are ethylene-*butylene* copolymer and ethylene-*octene* copolymer. Also, Claim 2 distinguishes itself from Imai et al., because blend of the claimed invention does not require both a polyethylene *and* a polypropylene. Example 13 reports a polypropylene continuous phase and dispersed phases of EPT rubber *and* HDPE.

3. Kobayashi et al. require PP, EPDM, and ethylene/ α -olefin copolymer where the mixing ratio is from 30-70 parts by weight of ethylene/ α -olefin copolymer to 100 parts of the three components. See Column 6, Lines 40-52. That amount is over ten times what Applicants want for their compatibilizer content.

4. Abdou-Sabet requires a norbornene/ α -olefin/diene rubbery polymer, whereas Applicants confine their olefinic rubber to EPDM in Claim 1. In Examples F39, F42 and Example 6, either EPDM or EPR are used as a compatibilizer (according to Col. 6, Lines 40-67), but not both *and* not without norbornene/ α -olefin/diene rubbery polymer. Moreover, the weight percent of the EPR or EPDM functioning as a compatibilizer is about 8.8%, above what Applicants claim.

5. Itoh et al. do not recognize the concept of using a polymeric compatibilizer in a minor amount, because Itoh et al. make no disclosure about compatibilizing the crystalline polyolefin resin and the rubber component. The Office identifies the EP

¹ The only example of EOR is a *comparative example* showing that Jeong et al. do not recognize the value of EOR as a compatibilizer as do Applicants.

rubber in Example 17, but that EP rubber is present in an amount of about 38% by weight. The Table at Col. 16 has B-4 and B-7 (both Ethylene Butylene Rubber), but the use of them *at a minimum* is 14% (Example 6 and Example 15) almost three times the maximum claimed by Applicants.

The pending, amended Claims 1-3 and 5-9 are novel over the five references cited. They are also patentable, because the addition of a minor amount, less than about 5 weight percent of one of the claimed compatibilizers results in a significant reduction in particle size of the dispersed rubber phase and also a significant reduction in the melt flow rate. Direct comparisons are made in the Examples in the specification, and whether presented in the form of images (Figs. 1-10) or in the form of numerical data (Tables 2-5), it is undeniable that something unexpected has occurred. See, for example, the comparison of Comparative Example K with Examples 19-23.

The "with and without" direct comparison of Applicants' 23 Examples against Comparative Examples A-K provide ample evidence of patentability.

Claims 1-3 and 5-9 are novel and inventive over all of the five reference.

Applicants request a Notice of Allowance.

If there are any matters that prevent a Notice of Allowance, the Examiner is invited to contact the Undersigned by telephone.

Respectfully submitted by:

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Date

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